

WHAT IS CLAIMED IS:

1 1. A composition for the treatment of proliferative disorders, comprising:
2 (i) lometrexol or a pharmaceutically acceptable salt thereof; and
3 (ii) one or more antiproliferative agents or pharmaceutically acceptable salts
4 thereof.

1 2. A composition in accordance with claim 1, further comprising folic
2 acid.

1 3. A composition in accordance with claim 1, wherein said
2 antiproliferative agent is a member selected from the group consisting of alkylating drugs,
3 antimetabolites, microtubule inhibitors, podophyllotoxins, antibiotics, nitrosoureas, hormone
4 therapies, kinase inhibitors, and antiangiogenic agents.

1 4. A composition in accordance with claim 1, wherein said
2 antiproliferative agent is selected from the group consisting of carboplatin, doxorubicin,
3 gemcitabine HCl, temolozolamide, cyclophosphamide, methotrexate, paclitaxel, etoposide,
4 carmustine, cisplatin, tamoxifen, and interferon.

1 5. A composition in accordance with claim 3, wherein said kinase
2 inhibitor is selected from the group consisting of tyrphostin AG1478 (4-(3-chloroanilino)-
3 6,7-dimethoxyquinazoline), tyrphostin AG490 (2-cyano-3-(3,4-dihydroxyphenyl)-N-
4 (benzyl)-2-propenamide), indirubin-3'-monoxime, alsterpaullone, genistein, Iressa™
5 (ZD1839), Gleevec™ (STI-571), SU5416, and Tarceva™ (OSI-774).

1 6. A method for the treatment of proliferative disorders, comprising
2 administering to a subject in need of such treatment an effective amount of a composition
3 comprising:

4 (i) lometrexol or a pharmaceutically acceptable salt thereof; and
5 (ii) one or more antiproliferative agents or pharmaceutically acceptable salts
6 thereof.

1 7. A method in accordance with claim 6, said composition further
2 comprising folic acid.

1 8. A method in accordance with claim 6, wherein said proliferative
2 disorder is cancer.

1 9. A method in accordance with claim 8, wherein said cancer is selected
2 from the group consisting of a solid tumor, a lymphoma, and a leukemia.

1 10. A method in accordance with claim 9, wherein said solid tumor is
2 selected from the group consisting of ovarian, breast, head and neck, prostate, glioma, colon,
3 stomach, hepatic, renal, chondrocytoma, small cell lung carcinoma, non-small cell lung
4 carcinoma, and melanoma.

1 11. A method in accordance with claim 6, wherein said proliferative
2 disorder is selected from the group consisting of rheumatoid arthritis, psoriasis, and benign
3 prostatic hyperplasia.

1 12. A method in accordance with claim 8, wherein said antiproliferative
2 agent is a member selected from the group consisting of alkylating drugs, antimetabolites,
3 microtubule inhibitors, podophyllotoxins, antibiotics, nitrosoureas, hormone therapies, kinase
4 inhibitors, and antiangiogenic agents.

1 13. A method in accordance with claim 8, wherein said antiproliferative
2 agent is selected from the group consisting of carboplatin, doxorubicin, gemcitabine HCl,
3 temozolamide, cyclophosphamide, methotrexate, paclitaxel, etoposide, carmustine,
4 cisplatin, tamoxifen, and interferon.

1 14. A method in accordance with claim 12, wherein said kinase inhibitor is
2 selected from the group consisting of tyrphostin AG1478 (4-(3-chloroanilino)-6,7-
3 dimethoxyquinazoline), tyrphostin AG490 (2-cyano-3-(3,4-dihydroxyphenyl)-N-(benzyl)-2-
4 propenamide), indirubin-3'-monoxime, alsterpaullone, genistein, Iressa™ (ZD1839),
5 Gleevec™ (STI-571), SU5416, and Tarceva™ (OSI-774).

1 15. A method in accordance with claim 6, wherein said antiproliferative
2 agent is a member selected from the group consisting of alkylating drugs, antimetabolites,
3 microtubule inhibitors, podophyllotoxins, antibiotics, nitrosoureas, hormone therapies, kinase
4 inhibitors, and antiangiogenic agents.

1 **16.** A method in accordance with claim **6**, wherein said antiproliferative
2 agent is selected from the group consisting of carboplatin, doxorubicin, gemcitabine HCl,
3 temolozolamide, cyclophosphamide, methotrexate, paclitaxel, etoposide, carmustine,
4 cisplatin, tamoxifen, and interferon.

1 **17.** A method in accordance with claim **15**, wherein said kinase inhibitor is
2 selected from the group consisting of tyrphostin AG1478 (4-(3-chloroanilino)-6,7-
3 dimethoxyquinazoline), tyrphostin AG490 (2-cyano-3-(3,4-dihydroxyphenyl)-N-(benzyl)-2-
4 propenamide), indirubin-3'-monoxime, alsterpaullone, genistein, Iressa™ (ZD1839),
5 Gleevec™ (STI-571), SU5416, and Tarceva™ (OSI-774).

1 **18.** A method for the treatment of proliferative disorders, comprising
2 administering to a subject in need of such treatment

3 (i) an effective first amount of lometrexol or a pharmaceutically acceptable
4 salt thereof; and

5 (ii) an effective second amount of one or more antiproliferative agents or
6 pharmaceutically acceptable salts thereof.

1 **19.** A method in accordance with claim **18**, said composition further
2 comprising folic acid.

1 **20.** A method in accordance with claim **18**, wherein said amount of
2 lometrexol and said amount of antiproliferative agent are administered simultaneously.

1 **21.** A method in accordance with claim **18**, wherein said amount of
2 lometrexol is administered before said amount of antiproliferative agent.

1 **22.** A method in accordance with claim **18**, wherein said amount of
2 lometrexol is administered before said amount of antiproliferative agent within a day.

1 **23.** A method in accordance with claim **18**, wherein said amount of
2 lometrexol is administered before said amount of antiproliferative agent within a week.

1 **24.** A method in accordance with claim **18**, wherein said amount of
2 antiproliferative agent is administered before said amount of lometrexol.

1 **25.** A method in accordance with claim **18**, wherein said amount of
2 antiproliferative agent is administered before said amount of lometrexol within a day.

1 **26.** A method in accordance with claim **18**, wherein said amount of
2 antiproliferative agent is administered before said amount of lometrexol within a week.

1 **27.** A method in accordance with claim **18**, wherein said proliferative
2 disorder is cancer.

1 **28.** A method in accordance with claim **27**, wherein said cancer is selected
2 from the group consisting of a solid tumor, a lymphoma, and a leukemia.

1 **29.** A method in accordance with claim **28**, wherein said solid tumor is
2 selected from the group consisting of ovarian, breast, head and neck, prostate, glioma, colon,
3 stomach, hepatic, renal, chondrocytoma, small cell lung carcinoma, non-small cell lung
4 carcinoma, and melanoma.

1 **30.** A method in accordance with claim **18**, wherein said proliferative
2 disorder is selected from the group consisting of rheumatoid arthritis, psoriasis, and benign
3 prostatic hyperplasia.

1 **31.** A method in accordance with claim **27**, wherein said antiproliferative
2 agent is a member selected from the group consisting of alkylating drugs, antimetabolites,
3 microtubule inhibitors, podophyllotoxins, antibiotics, nitrosoureas, hormone therapies, kinase
4 inhibitors, and antiangiogenic agents.

1 **32.** A method in accordance with claim **27**, wherein said antiproliferative
2 agent is selected from the group consisting of carboplatin, doxorubicin, gemcitabine HCl,
3 temolozolamide, cyclophosphamide, methotrexate, paclitaxel, etoposide, carmustine,
4 cisplatin, tamoxifen, and interferon.

1 **33.** A method in accordance with claim **31**, wherein said kinase inhibitor is
2 selected from the group consisting of tyrphostin AG1478 (4-(3-chloroanilino)-6,7-
3 dimethoxyquinazoline), tyrphostin AG490 (2-cyano-3-(3,4-dihydroxyphenyl)-N-(benzyl)-2-
4 propenamide), indirubin-3'-monoxime, alsterpaullone, genistein, Iressa™ (ZD1839),
5 Gleevec™ (STI-571), SU5416, and Tarceva™ (OSI-774).

1 **34.** A method in accordance with claim **18**, wherein said antiproliferative
2 agent is a member selected from the group consisting of alkylating drugs, antimetabolites,
3 microtubule inhibitors, podophyllotoxins, antibiotics, nitrosoureas, hormone therapies, kinase
4 inhibitors, and antiangiogenic agents.

1 **35.** A method in accordance with claim **18**, wherein said antiproliferative
2 agent is selected from the group consisting of carboplatin, doxorubicin, gemcitabine HCl,
3 temozolamide, cyclophosphamide, methotrexate, paclitaxel, etoposide, carmustine,
4 cisplatin, tamoxifen, and interferon.

1 **36.** A method in accordance with claim **34**, wherein said kinase inhibitor is
2 selected from the group consisting of tyrphostin AG1478 (4-(3-chloroanilino)-6,7-
3 dimethoxyquinazoline), tyrphostin AG490 (2-cyano-3-(3,4-dihydroxyphenyl)-N-(benzyl)-2-
4 propenamide), indirubin-3'-monoxime, alsterpaullone, genistein, Iressa™ (ZD1839),
5 Gleevec™ (STI-571), SU5416, and Tarceva™ (OSI-774).